

May 4, 2017

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, CG Docket No. 03-123; *Structure and Practices of the Video Relay Service Program*, CG Docket No. 10-51

Dear Ms. Dortch:

In accordance with the *Second Protective Order* for the above-referenced proceedings, Sorenson Communications, LLC (“Sorenson”) herein submits a redacted version of the attached reply comments in the above-referenced proceedings.

Sorenson has designated for highly confidential treatment the marked portions of the attached documents pursuant to the *Second Protective Order* in CG Docket Nos. 03-123 and 10-51.¹ Sorenson’s comments include granular data with respect to its costs for various categories of both allowed and additional costs, in absolute total and on a per-minute basis, the amount of traffic it receives, a list of its intellectual property and the valuation thereof, its interpreter efficiency, and its interpreter wage levels over time. As such these materials fall under the following enumerated items in Appendix A of the *Second Protective Order*:

2. Information that discusses in detail current or future plans to compete for a customer or specific groups or types of customers (*e.g.*, business or residential customers), including current and future procurement strategies, pricing strategies, product strategies, advertising or marketing strategies, business plans, technology implementation or deployment plans and strategies (*e.g.*, engineering planning documents), plans for handling acquired customers, and human resources and staffing strategies.
3. Information that provides granular information about a Submitting Party’s past, current or future costs, revenues, marginal revenues, or market share, and future dividends.
4. Information that provides numbers of customers or devices when broken down by sub-national geography, customer type (*e.g.*, business) and/or levels or patterns of VRS usage, or when in a time series.

¹ *Structure & Practices of the Video Relay Serv. Program; Telecomms. Relay Servs. & Speech-to-Speech Servs. for Individuals with Hearing & Speech Disabilities*, Second Protective Order, DA 12-858, 27 FCC Rcd. 5914 (Cons. & Gov’t Affs. Bur. 2012).

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Ms. Marlene H. Dortch
May 4, 2017
Page 2 of 2

6. Information that provides detailed or granular information about specific end point equipment or network operation, including engineering information and information related to equipment purchases or payments of licensing fees.

Pursuant to the protective order and additional instructions from Commission staff, Sorenson is filing a redacted version of the document electronically via ECFS, one copy of the Highly Confidential version with the Secretary, two copies of the redacted version with the Secretary, and sending copies of the highly confidential version to Eliot Greenwald and Robert Aldrich of the Consumer and Governmental Affairs Bureau and the TRS Reports mailbox.

Please contact me if you have any questions or require any additional information.

Sincerely,



John T. Nakahata
Counsel to Sorenson

Attachment

cc: Eliot Greenwald
Robert Aldrich
TRSReports@fcc.gov

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**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20544**

In the Matter of:

Structure and Practices of the Video Relay
Service Program

CG Docket No. 10-51

Telecommunications Relay Services and
Speech-to-Speech Services for Individuals
with Hearing and Speech Disabilities

CG Docket No. 03-123

**REPLY COMMENTS OF SORENSON COMMUNICATIONS, LLC,
REGARDING SECTION IV.A-B AND F OF
THE FURTHER NOTICE OF PROPOSED RULEMAKING**

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May 4, 2017

Table of Contents

SUMMARY AND INTRODUCTION	2
ARGUMENT	7
I. Deaf Advocates and Consumer Groups Agree That the ADA Requires That End-User Charges to Deaf Consumers Not Increase Further, Including for Necessary Equipment.	7
A. Consumer Groups Agree That the Commission Should Set Rates That Account for the True Costs of Providing VRS, Including Equipment Costs, or Otherwise Risk Impermissibly Shifting Costs to Consumers.....	8
B. Sorenson Has Documented That the Appropriate VRS Rate to Meet the ADA’s Requirements is \$4.19.....	11
II. Data Submitted by Rolka Loube Shows That ***BEGIN HIGHLY CONFIDENTIAL*** [REDACTED] [REDACTED] *** END HIGHLY CONFIDENTIAL***	16
III. The <i>FNPRM</i> ’s Tier Proposals Lack Factual Basis.	17
A. Rolka Loube’s Data Completely Eviscerate the Argument That ***BEGIN HIGHLY CONFIDENTIAL*** [REDACTED] [REDACTED] ***END HIGHLY CONFIDENTIAL***	18
B. Even If the Commission Adopts a Tiered Rate Structure, It Must Treat ZVRS’ Two Operating Subsidiaries as a Single Provider, or Allow Other Providers Similarly to Restructure	23
C. The Unsupported Claims by Other VRS Providers Regarding Interoperability, Stockpiling Interpreters, and Non-Compete Clauses Are Inaccurate and, in Any Event, Do Not Justify the <i>FNPRM</i> ’s Tiered Rate Proposal.	24
IV. The Commission Should Use the Market to Set VRS Rate Levels.	30
A. Rates Set by Means of A Reverse Auction Would Be Preferable to FCC-Determined Rates.....	30
B. Requiring Providers of Voice Telephone Service to Provide VRS Would Be Preferable to Continuing Old-Fashioned Rate Regulation.....	32
CONCLUSION.....	34

REPLY COMMENTS OF SORENSON COMMUNICATIONS, LLC

Sorenson Communications, LLC, hereby replies to comments filed with respect to Parts AV.A-B and F of the *Further Notice of Proposed Rulemaking* (“*FNPRM*”) regarding Video Relay Service (“VRS”). The Commission is on the cusp of setting a new course for VRS and has the unique opportunity to adopt a methodology that drives efficiency and ensures functional equivalent service, consistent with the statute. Sorenson hopes that the Commission will seize this opportunity because the alternative path, which was outlined in the *FNPRM*, would set Tier III rates below costs, including intellectual property costs, and would both “discourage or impair the development of improved technology” and require users of VRS to pay rates “greater than the rates paid for functionally equivalent voice communications services” in violation of the express commands of Section 225 and the Americans with Disabilities Act.

If the Commission does not adopt one of Sorenson’s proposals for market-determined rates, the only rate in the record that meets ADA requirements is a \$4.19 unitary per minute rate. Even if the Commission intends to push all costs of end user devices onto deaf consumers in violation of the ADA, the only justifiable rate in the record for VRS, without necessary equipment, is \$3.73 per minute. The *FNPRM*’s proposal for tiered rates is based on multiple inaccurate or incomplete factual assertions that cannot be reconciled with the Administrator’s data which was placed in the record on April 25, 2017. Moreover, if applied in a manner that treated the now-combined ZVRS and Purple as if they were still separately-owned without merger integration opportunities—as the Administrator’s annual report implies—the tiers would be even more skewed, and arbitrary and capricious.

SUMMARY AND INTRODUCTION

The consumer groups have correctly recognized that the principal proposal before the Commission would unlawfully shift many of the costs of VRS to them. In the past, the Commission has never actually set rates at the level of its allowable cost calculations, but instead has set higher rates that, as a practical matter, have allowed providers to provide functional equivalent end-to-end service with functional equivalent rates. But now the Commission proposes to set rates in a manner that will prevent providers from covering the true costs of providing functional equivalent service.¹ Doing so would be contrary to the statutory requirement that users should pay no more than hearing users pay for equivalent voice communications services,² because VRS users must pay more than voice users to obtain broadband needed for VRS, and videophones cost far more than voice telephones. Nothing in the record contradicts Sorenson's showing that the broadband costs necessary for VRS alone far exceed the costs hearing consumers pay for voice telephone service, and that voice telephone service can be purchased at a small fraction of the cost of necessary VRS equipment.

Rather than driving down VRS rates to shift costs—and charges—to VRS users, the Commission should follow one of the market-determined alternatives proposed by Sorenson—a reverse auction or system of carrier contracts with VRS providers. If the Commission does not move to a market-determined mechanism and instead elects to continue to set VRS rates, the Commission should include all costs necessary for consumers to receive and use VRS, including

¹ See *Structure and Practices of the Video Relay Service Program; Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, Report and Order, Notice of Inquiry, Further Notice of Proposed Rulemaking, and Order, 32 FCC Rcd. 2436, 2017 WL 1167513 at *32 ¶ 99 (rel. Mar. 23, 2017) (“FNPRM”).

² See 47 U.S.C. § 225(d)(1)(D).

growth in Video Interpreter (“VI”) wages, numbering fees, intellectual property, and access device costs, along with a commercially reasonable margin as compared with other skilled labor-intensive industries. As Sorenson has shown, that would result in a per-minute rate of \$4.19, an amount that would be a sustainable unitary rate for all efficient providers. And even if the Commission ultimately decides to force deaf consumers to pay hundreds of dollars for videophones and monitors, or other devices and software necessary to utilize VRS, Sorenson has shown that the rate should not be lower than \$3.73 per minute. At these levels, there would be no need for tiered rates, except possibly to continue to have ratepayers subsidize the very smallest providers that have not been able to attract a critical mass of customers even after eight to nine years of operation.

The Administrator’s data relied upon in the *FNPRM*—both the public and highly confidential data—eviscerates the basis for any of the tiered rates proposed in the *FNPRM*, including the Tier III rates. First, although para. 91 of the *FNPRM* stated, “[W]e agree with Joint VRS Providers that economies of scale continue to increase significantly for VRS providers with more than 1,000,000 monthly minutes,”³ *****BEGIN HIGHLY CONFIDENTIAL** *** [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

³ *FNPRM*, 2017 WL 116751 at *30 ¶ 91.

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Accordingly, the Commission cannot rely on economies of scale to justify a higher rate for ZVRS, especially now that it has acquired Purple. Instead, if the Commission sets rates rather than using a market mechanism, it should establish \$4.19 as the unitary rate to which all providers should move—or \$3.73 if it continues to exclude the costs of necessary access devices.

Second, *****BEGIN HIGHLY CONFIDENTIAL*****

END HIGHLY CONFIDENTIAL*** It would be clearly arbitrary and capricious to pick rate levels without a consistent methodology and justification.

Third, neither of the *FNPRM*'s proposed rates for Tier III has any consistent methodological basis. The proposed rate of \$2.63 is based on 2015 reported allowable costs (which are not only incomplete, as described above, but also out-of-date), without any return component. The \$2.83 rate proposed by the other VRS providers was based on industry average 2015 reported costs (as published by the Administrator in 2015), plus outreach costs, but with no return component. \$3.49 is simply the current Tier III rate, which fails to include all costs plus a reasonable margin—even just for VRS service without access devices.

Finally, the Administrator's annual report's projections of TRS Fund demand for Funding Year 2017-2018 reveal that the Administrator is assuming (and apparently currently paying) ZVRS and Purple as if they were not affiliated, such that the now combined company receives

⁴ *Id.* at *31 ¶ 94.

two sets of Tier I and Tier II payments.⁵ Ignoring the fact that ZVRS owns Purple and will be integrating operations would heighten the arbitrary and capricious nature of the tiers.

Sorenson does not dispute that Convo and Global, which report that *****BEGIN**

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[REDACTED] *****END HIGHLY CONFIDENTIAL***** But the Commission has recognized that tiered rates subsidize inefficient providers, and it is time for the Commission to respect the statute's direction to provide functionally equivalent service "in the most efficient manner" and to stop creating a special tiered rate that continues to subsidize these two providers. Each company has been in business for eight (Convo) or nine (ASL/Global) years without getting to scale, so it is mistaken to think that an "emergent" rate will allow them to attract the users they have failed to attract in the past. If they are able to reduce costs and become more efficient, these providers can continue to provide service, like all VRS providers, at the unitary rate.

Moreover, unsubstantiated assertions about interoperability and interpreters lack any basis in fact. The VRS providers' engineers have largely solved interoperability issues and the upcoming switch to SIP should improve video quality and make it much easier to fix any problems that arise in the future. Sorenson also disputes the unsubstantiated and blatantly false statements about Sorenson's practices and encourages the Commission to disregard such statements. For example, the unsubstantiated claims that Sorenson hires more interpreters than it needs and overpays them are completely incorrect. Like all other Sorenson employees, interpreters cannot work simultaneously for Sorenson and another VRS provider, and are subject to a six-month non-compete agreement, which is reasonable in light of the training Sorenson

⁵ See Interstate Telecommunications Relay Services Fund Payment Formula and Fund size Estimate at Exhibit 2, CG Docket Nos. 10-51 and 03-123 (filed May 2, 2017).

provides and its need to protect its confidential trade secrets. In any event, raising rates for all providers except for Sorenson makes no sense as a response to a problem involving interpreters or interoperability, particularly over a prospective four-year period. And it bears emphasis that

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[REDACTED] ***END HIGHLY CONFIDENTIAL*** which shows that any problems Convo and Global are experiencing can be overcome.

Sorenson's market-based rate proposals are not only more consistent with the statute and precedent but also plainly superior to continued regulator-determined rate regulation, and no commenter has shown otherwise. Indeed, in its *Business Data Services Order*, the Commission observed, "Even well-crafted regulations have unintended consequences, inhibiting competition, reducing investment, and end user benefits."⁶ ZVRS's expert, former FCC Commissioner Furchtgott-Roth, would prefer a market-based approach, but thought the Commission was doomed to follow a cost-based approach in the near term. However, we assume ZVRS did not provide him with its cost data ***BEGIN HIGHLY CONFIDENTIAL*** [REDACTED]

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Dr. Furchtgott-Roth's distinction of Sorenson's proposed reverse auction methodology from other auctions the Commission has conducted is misguided. Allowing multiple providers to participate in the market is beneficial because it allows for consumer choice. Similarly, not

⁶ *Business Data Services in an Internet Protocol Environment; Technology Transitions; Special Access for Price Cap Local Exchange Carriers; AT&T Corporation Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Service*, Report and Order, 2017 WL 1632988 at *40 ¶ 126 (rel. Apr. 28, 2017).

auctioning any quantity of minutes is beneficial because it means that users will continue to have a choice among providers for every call.

Dr. Furchtgott-Roth finds Sorenson's private contract-based proposal to more closely follow the statute by requiring telephone companies to provide VRS to be "intellectually intriguing," but believes it is a "much longer-term solution."⁷ However, the principal proposal before the Commission is yet another four-year, cost-based plan that, unlike the prior four-year, cost-based plan, does not even *aim* at achieving a unitary, market-based rate. When Congress adopted the Americans with Disabilities Act, it gave telephone companies three years to come into compliance.⁸ Because VRS providers are up and running, it should take much less than three years for providers to contract with them for service or self-provision VRS.

ARGUMENT

I. DEAF ADVOCATES AND CONSUMER GROUPS AGREE THAT THE ADA REQUIRES THAT END-USER CHARGES TO DEAF CONSUMERS NOT INCREASE FURTHER, INCLUDING FOR NECESSARY EQUIPMENT.

Section 225's requirement that deaf individuals who use VRS must "pay rates no greater than the rates paid for functionally equivalent voice communications services" is a critical element of the ADA's remedial goal.⁹ As Sorenson explained in its initial comments, to fulfill its responsibility to deaf consumers, the Commission needs to adopt a rate structure adequate to sustain—and indeed *improve*¹⁰—VRS over the long run. And as Sorenson further explained, the

⁷ Expert Report of Harold Furchtgott-Roth at 20, CG Docket Nos. 10-51 and 03-123 (filed Apr. 24, 2017) ("Furchtgott-Roth Expert Report").

⁸ See 47 U.S.C. § 225(c).

⁹ *Id.* § 225(d)(1)(D).

¹⁰ See *id.* § 225(d)(2).

FNPRM's proposed rates would not do that because they rely on an unreasonably incomplete subset of providers' actual costs of providing the service.

Joining Sorenson in its call to set the VRS rate while accounting for the true costs of VRS are a collection of consumer groups¹¹ and the VRSCA.¹² Both sets of consumer comments urge the Commission to account for, among other things, equipment and research and development costs, both of which are “integral to the provision, continuation[,] and enhancement of quality VRS services.”¹³

A. Consumer Groups Agree That the Commission Should Set Rates That Account for the True Costs of Providing VRS, Including Equipment Costs, or Otherwise Risk Impermissibly Shifting Costs to Consumers.

Despite the ADA's requirement that deaf individuals who use VRS must “pay rates no greater than the rates paid for functionally equivalent voice communications services,”¹⁴ VRS is already more expensive for its consumers than traditional voice communications.¹⁵ For instance, VRS consumers must on average pay far more than hearing users pay for voice communications—by more than \$50 per month—just to procure the broadband service necessary

¹¹ See Comments of Consumer Groups on Further Notice of Proposed Rulemaking at 2-3, CG Docket Nos. 10-51 and 03-123 (filed Apr. 24, 2017) (“Consumer Groups Comments”). Participating groups include Telecommunications for the Deaf and Hard of Hearing, Inc., National Association of the Deaf, Deaf and Hard of Hearing Consumer Advocacy Network, Hearing Loss Association of America, Association of Late-Deafened Adults, Inc., Cerebral Palsy and Deaf Organization, Deaf Seniors of America, and California Coalition of Agencies Serving the Deaf and Hard of Hearing.

¹² See Comments of the Video Relay Services Consumer Association at 1-3, CG Docket Nos. 10-51 and 03-123 (filed Apr. 24, 2017) (“VRSCA Comments”).

¹³ Consumer Groups Comments at 3.

¹⁴ 47 U.S.C. § 225(d)(1)(D).

¹⁵ See Comments of Sorenson Communications, LLC, Regarding Section IV.A-B and F of the Further Notice of Proposed Rulemaking at 3, Table 1, CG Docket Nos. 10-51 and 03-123 (filed Apr. 24, 2017) (“Sorenson Comments”).

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to use VRS.¹⁶ To make VRS work efficiently, consumers need to have an upload speed of at least 5 Mbps, otherwise calls are more likely to be pixelated, requiring VIs and consumers to spend more time clarifying what is being said—both disrupting conversation flow and requiring more conversation time and thus expense to the Fund. This disparity in charges borne by end users is particularly troubling considering that deaf Americans are, on average, poorer than hearing Americans.¹⁷ Indeed, as described in the attached report of John Horrigan, 33% of all households where people report deafness or serious difficult hearing have annual incomes of \$25,000 or less, as compared to only 21% of others.¹⁸ Further, the median household income for those having serious hearing problems or deafness is \$38,500, whereas the figure is \$56,800 for all others.¹⁹ Moreover, more than 40% of Americans who are deaf or have serious difficulty hearing *do not* have broadband, and the percentage increases to more than 65% for those whose annual household income is under \$25,000.²⁰

Given these additional costs that VRS users must bear, the Commission cannot, consistent with Section 225, expect VRS users to pay hundreds of dollars more than hearing users do for the necessary equipment. Currently, VRS providers are able to cover the cost of

¹⁶ See FCC URBAN RATE SURVEY DATA AND RESOURCES, 2017 Voice Survey Methodology at 6, *available at* <https://www.fcc.gov/file/12055/download>; FCC URBAN RATE SURVEY DATA AND RESOURCES, 2017 Broadband Survey Results, *available at* <https://www.fcc.gov/file/12059/download> (data for rates at 5 Mbps upload); *see also* Sorenson Comments at 3-4.

¹⁷ See Blanchfield et al., *The Severely to Profoundly Hearing-Impaired Population in the United States: Prevalence Estimates and Demographics* at 4, JOURNAL OF THE AMERICAN ACADEMY OF AUDIOLOGY, Vol. 12 No. 4 at 185-186 (Apr. 2001), *available at* https://www.audiology.org/sites/default/files/journal/JAAA_12_04_03.pdf.

¹⁸ See John B. Horrigan, *Broadband and Internet Use Among Those With Difficulty Hearing*, at 6 (attached as Exhibit 1).

¹⁹ *Id.*

²⁰ *Id.*

equipment for their users. But a rates decrease along the lines of the *FNPRM*'s proposal is likely to have the effect of shifting these costs to the users. As a group of consumer groups noted in their comments, "VRS providers are dependent on reimbursement rates that cover the entirety of their legitimate costs . . . [E]quipment and research and development costs currently are not reimbursable to providers, yet both are integral to the provision, continuation and enhancement of quality VRS services."²¹ And as another consumer group observed, "If the FCC sets compensation rates too low, as close as possible to what the FCC considers allowable costs, the VRS providers may be forced to shift some of the other costs to users."²²

As the Commission itself has previously recognized, VRS as a service involves three components: "videophone equipment, video communications service, and ASL relay interpreter service."²³ Without each of these components, a deaf user would be unable to place a VRS call, and that would violate the Commission's duty to ensure the availability of VRS.²⁴ Thus, in order to comply with Section 225, the Commission must set rates to ensure, to the extent possible, that VRS users are not forced to pay greater rates than the rates paid for functionally equivalent voice communications.

²¹ Consumer Groups Comments at 3.

²² VRSCA Comments at 2.

²³ *Structure and Practices of the Video Relay Service Program*, Notice of Inquiry, 25 FCC Rcd. 8597, 8608 ¶ 32 (2010).

²⁴ See 47 U.S.C. § 225(b)(1).

B. Sorenson Has Documented That the Appropriate VRS Rate to Meet the ADA's Requirements is \$4.19.

In its initial comments, Sorenson explained that the sustainable VRS rate that does not shift the cost of integral equipment to VRS users is \$4.19.²⁵ The table below, which was included in Sorenson's initial comments, shows its work: (1) starting with the industry average projected allowable costs for 2017-2018 plus the additional allowable costs in Sorenson's revised RSDR filing (\$2.955), *less* the \$.035 per minute rate of return, means \$2.92 is the starting point;²⁶ (2) add to that costs for numbering and intellectual property for service; and (3) add to that research and development for equipment, equipment, equipment installation and outreach, and intellectual property related to the equipment.

Starting with the industry average projected allowable costs for 2017-2018 (\$2.92 including Sorenson's corrections) is sensible because, as Sorenson explained in its comments, the wages for VIs can reasonably be expected to *increase* in coming years at least on pace with inflation, and most likely more, because wages for community interpreters have increased substantially over the last few years.²⁷ Indeed, this understates the impact of VI and wage and benefit cost increases over the next five years, which are likely to be 15-25%.²⁸ According to Sorenson's surveys, wages for community interpreters increased more than 9% from 2012 to 2016, and the most-skilled interpreters' community rates increased by 23%.²⁹ Exhibit 7 provides

²⁵ See Sorenson Comments at 17-48.

²⁶ Rolka Loube's report did not acknowledge Sorenson's corrected costs filing. However, there is no basis for ignoring the corrected data, which were submitted on April 17, 2017.

²⁷ See Sorenson Comments at 22-23.

²⁸ See Declaration of Christopher Wakeland, VP of Interpreting, Sorenson Communications, LLC ¶ 7 ("Wakeland Decl.") (attached as Exhibit 3).

²⁹ *Id.*

examples of community interpreting rates. The need to attract highly skilled interpreters to work in VRS rather than in the community is exerting significant upward pressure on VI wages.³⁰

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HIGHLY CONFIDENTIAL*** Sustained stagnation in VI wages is therefore not sustainable over the longer term. Furthermore, interpreter-related benefits costs are increasing—and will continue to increase—both for full-time interpreters (such as for health care insurance), as well as for part-time interpreters. For instance, an increasing number of states and localities are requiring companies to provide paid sick leave to part-time employees.³¹ VRS providers only began incurring these costs in 2016, and they escalated as more states and localities adopted these requirements—and they will continue to increase to the extent that additional state or localities do so. Thus, the full costs of complying with these requirements that more and more jurisdictions are adopting are not reflected in the historical data. It would be arbitrary and capricious to fail to recognize in VRS compensation rates that these critical labor costs will continue to increase substantially across the next four years.

Moreover, as Sorenson explained its comments, there can be no reasonable expectation that there will be sustained increases in VI efficiency to offset these wage and benefits cost

³⁰ See *id.* ¶ 6. Given these market forces that apply to VRS generally, it would be arbitrary and not competitively neutral to set rates—such as in the manner proposed by the *FNPRM*’s multiple tiers proposal—that would have the effect of allowing other VRS providers, but not Sorenson, to increase wages for interpreters.

³¹ See *id.* ¶ 9; see also, e.g., Cal. Labor Code Art. 1.5; Conn. Gen. Stat. § 31-57r; 21 Vermont Stat. Ann. § 481 *et seq.*; Mass. Gen. L. Ch. 149 § 148c.

increases. VIs are not automatons. For Sorenson, VIs are handling calls nearly all their available time, save their hourly breaks.³²

Further, as explained in Sorenson's comments, the FCC's weighted average cost of capital for Local Exchange Carriers is not a reasonable basis for establishing an appropriate operating margin, both because it does not have any bearing on an appropriate margin and because it also failed to take into account taxes (as occurs when applying the LEC prescribed rate of return).³³ However, a comparison to adjusted EBITDA margins for publicly traded information technology consulting companies—which are also skilled-labor intensive—shows that a reasonable margin would be 9.5% after taxes (with a 40% tax rate), or 15.9%, before taxes.³⁴

Totaling these costs, and applying a reasonable 9.5% post-tax (15.9% permitted pre-tax margin) shows that the rate should be no lower than \$4.19.

³² See Wakeland Decl. ¶ 10.

³³ See Sorenson Comments at 7 n.14; 37-38.

³⁴ See *id.* at 37.

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Starting Rate	\$2.92
Numbers-Related Costs	████████
Intellectual Property for Service	████████
CPE Research and Development	████████
Customer Premises Equipment	████████
Intellectual Property for End Points	████████
Installs and Outreach	████████
15.9% Permitted Margin	\$0.58
Total Rate	\$4.19 ³⁵
Taxes Paid	(\$0.23)
Margin After Taxes	9.54%

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It bears noting that when Sorenson discusses equipment, it is *not* referring to or including items such as iPads, laptops, and certainly not video game consoles.³⁶ The VRS equipment Sorenson distributes—its purpose-built videophones that are tailored to the needs of a deaf user; routers; cables; and TV monitors with built-in speakers for VCO, sufficient picture quality for VRS, and HDMI capability—is all necessary for the provision of quality VRS. Rather than

³⁵ The figures here sum to \$4.21 rather than \$4.19, due to error introduced by rounding to two decimal places.

³⁶ See Sorenson Comments at 15-16.

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some kind of gold-plating, this equipment is “integral to the provision, continuation and enhancement of quality VRS services” to which VRS users are statutorily entitled.

Even if the Commission decides (contrary to the statute) to push hundreds of dollars of equipment costs onto deaf consumers, the appropriate VRS rate should not be lower than \$3.73, with a 15.9% margin, as illustrated below.

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Starting Rate	\$2.92
Numbers-Related Costs	██████
Intellectual Property for Service	██████
15.9% Permitted Margin	\$0.51
Total Rate	\$3.73 ³⁷
Taxes Paid	(\$0.20)
Margin After Taxes	9.54%

Yellow Highlighting = Highly Confidential.

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³⁷ The figures here sum to \$3.74 rather than \$3.73, due to error introduced by rounding to two decimal places.

II. DATA SUBMITTED BY ROLKA LOUBE SHOWS THAT *BEGIN HIGHLY CONFIDENTIAL*****

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The consumer groups have made clear³⁸ that VRS consumers strongly desire competitive options and a choice of VRS providers.³⁹ And Sorenson agrees that consumer choice is beneficial because competition encourages VRS providers to invest in and improve their services.⁴⁰ In the context of VRS, preserving competitive choice for consumers while also moving to efficient rates creates some tension,⁴¹ but Sorenson has submitted a rate proposal the Commission could adopt immediately that would preserve choice, promote competition, and encourage greater efficiencies.

Sorenson's comments set forth in great detail how the Commission should calculate a sustainable, unified VRS rate (if it does not utilize a market-based approach).⁴² The result of that calculation, which accounts for the true costs of VRS and applies a reasonable pre-tax margin, totals \$4.19. Alternatively, calculating the rate while continuing to exclude costs relating to customer premises equipment but applying the same margin calculation yields a rate of \$3.73.

³⁸ See, e.g., Letter from Tamar E. Finn and Danielle Burt, Counsel to TDI, to Marlene H. Dortch, Secretary, FCC, at 1, CG Docket Nos. 03-123 and 10-51 (filed Apr. 28, 2016); Consumer Groups' TRS Policy Statement at 2, attached to Letter of Tamar Finn and Brett Ferencsak, Counsel to TDI, to Marlene H. Dortch, Secretary, FCC, CG Docket Nos. 03-123 and 10-51 (filed Apr. 12, 2011).

³⁹ Cf. also Consumer Groups Comments at 4.

⁴⁰ See *Structure and Practices of the Video Relay Service Program; Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, Report and Order and Further Notice of Proposed Rulemaking, 28 FCC Rcd. 8618, 8699 ¶ 200 n.525 (2013) ("VRS Reform Order") (recognizing value of consumer choice in VRS market).

⁴¹ See *FNPRM*, 2017 WL 1167513 at *28 ¶ 86.

⁴² See Sorenson Comments at 39-41 (showing final calculations).

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Perhaps surprisingly given Purple and ZVRS' participation in the Joint Proposal,

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III. THE *FNPRM*'S TIER PROPOSALS LACK FACTUAL BASIS.

The highly confidential data that were placed in the record by the Fund Administrator after the opening comments were filed show that there is no good reason for the Commission to continue to use tiered rates for any reason other than transitioning to a unitary rate. In addition,

⁴³ See Attachment A to Letter from Eliot Greenwald, Deputy Chief, Disability Rights Office, to Marlene H. Dortch, Secretary, FCC, CG Docket Nos. 10-51 and 03-123 (filed Apr. 25, 2017) (“Rolka Loube Highly Confidential Data”).

⁴⁴ See *id.*

none of the commenters' arguments in favor of a four-year tiered structure have merit. Accordingly, the Commission should adopt a market-based ratemaking methodology, as it told the D.C. Circuit it planned to do in order to justify its interim reliance on tiers in 2013 despite their inefficiency.⁴⁵ At a minimum, the Commission should transition to a price cap mechanism with a sustainable, long-term rate that accounts for all costs of supplying VRS to a deaf consumer—including both service and a necessary access device—in excess of what they already pay.

A. Rolka Loube's Data Completely Eviscerate the Argument That *BEGIN
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Sorenson's expert, Dr. Michael Katz, showed in 2013 that economies of scale in providing VRS are "largely exhausted by the time a VRS provider's traffic volume reaches 250,000 per month."⁴⁶ It is notable that the other providers have never offered any economic analysis to the contrary. Rather, they have claimed that *their* costs of providing service are higher than Sorenson's costs and alleged that the difference must be due to economies of scale. In 2013, they claimed there were substantial efficiency gains when providers reached 500,000 and 1,000,000 minutes, which conveniently kept their minutes primarily in Tiers 1 and 2. Now, without any attempt to explain why those cut-off points might have changed, the very same providers argue that there are substantial efficiency gains at 1,000,000 and 2,500,000 minutes per month—which will conveniently keep ZVRS out of Tier 3 after it absorbs Purple. The *FNPRM*

⁴⁵ See Brief for Respondents at 24, *Sorenson Commc'ns, Inc. v. FCC*, 765 F.3d 37 (D.C. Cir. 2014) (No. 13-1215).

⁴⁶ An Economic Analysis of VRS Policy Reform: Declaration of Michael L. Katz ¶ 28, *attached as Appendix A to Comments of Sorenson Communications, Inc.*, CG Docket Nos. 10-51 and 03-123 (filed Mar. 9, 2012) ("Katz March 9 Decl.").

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embraced these claims, stating, “[W]e agree with the Joint VRS Providers that economies of scale continue to increase significantly for VRS providers with more than 1,000,000 monthly minutes.”⁴⁷

Rolka Loube’s data show that there is absolutely no merit to this conclusion. ***

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[REDACTED]

[REDACTED]

[REDACTED]

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[REDACTED]

[REDACTED]

[REDACTED]

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[REDACTED]

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The data filed by ZVRS and Purple in February 2017 does not contradict these conclusions. *****BEGIN HIGHLY CONFIDENTIAL***** [REDACTED]

⁴⁷ *FNPRM*, 2017 WL 1167513 at *30 ¶ 91.

⁴⁸ *See* Rolka Loube Highly Confidential Data.

⁴⁹ *See id.*

⁵⁰ Although the Rolka Loube data placed in the record on April 25, 2017 reflected industry average allowable costs of \$2.63 for 2015, based on 2016 cost filings, Rolka Loube’s annual report, filed on April 28, 2017, shows an updated 2015 average industry allowable costs of \$2.6847.

⁵¹ *See* Rolka Loube Highly Confidential Data.

[REDACTED]

[REDACTED] [REDACTED]

[REDACTED]

[REDACTED] [REDACTED]

[REDACTED]

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Of course, any rates must include a reasonable return, and all costs necessary to avoid shifting costs to deaf consumers beyond the costs paid by hearing consumers for voice telephone service—which yields rates above the 2015 allowable costs reported by the Administrator. As Sorenson explained in its opening comments, that requires a rate of \$4.19 per minute, or \$3.73 per minute if the Commission seeks to shift hundreds of dollars of end-user access device costs to deaf consumers in violation of the ADA. The only result justified by the data is that these rates apply equally both to the combined ZVRS/Purple and to Sorenson. The data make clear that the two providers that supply ***BEGIN HIGHLY CONFIDENTIAL*** [REDACTED] *** END HIGHLY CONFIDENTIAL*** of VRS minutes are ***BEGIN HIGHLY CONFIDENTIAL *** [REDACTED]

⁵² See Letter from Gregory Hlibok, Chief Legal Officer, CSDVRS, LLC d/b/a ZVRS, to Karen Peltz Strauss, FCC, CG Docket Nos. 10-51 and 03-123, at 3 (filed Feb. 15, 2017); Rolka Loube Highly Confidential Data.

⁵³ See Letter from Paul C. Besozzi, Counsel to Purple Communications, Inc., to Karen Peltz Strauss, FCC, CG Docket Nos. 10-51 and 03-123, at 5 (filed Feb. 15, 2017) ; Rolka Loube Highly Confidential Data.

⁵⁴ While Sorenson believes that the Commission properly must include both outreach and access device costs if it is going to determine VRS rates, it must do so consistently across all providers and tiers. Any other result would be arbitrary and capricious.

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With respect to Convo and Global, they have been in existence since 2009 and 2008, respectively, there is no reason for the Commission to continue to subsidize them, particularly by means of a so-called “emergent” rate, which suggests that they are new entrants. ***BEGIN

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Indeed, as discussed in the *FNPRM*, the Emergent Tier either does not appear to contemplate that these companies will exit the Emergent Tier, as handling the 500,001st minute in a month would result in a loss of \$235,000 in compensation for that month. The only other possible alternative—on which the *FNPRM* is unclear—would be if the *FNPRM* contemplates providing a permanent higher rate for the first 500,000 minutes even after the so-called “emergent” provider has grown beyond the “emergent” level of less than 500,000 minutes per month. Either result is irrational.

The report by ZVRS’s expert, former Commissioner Furchtgott-Roth, does not establish a basis for the tiered rates as proposed by the other providers. Indeed, Dr. Furchtgott-Roth plainly recognizes the advantages of market-based rates, but nevertheless seemingly reluctantly concludes that “[t]he Commission has little choice in the near term but to continue rate

regulation of VRS.”⁵⁵ Although he comments that the cost structures of VRS firms are characterized “by some degree of economies of scale,”⁵⁶ strikingly, he does not disagree with (or even address) Professor Katz’s conclusion that economies of scale in providing VRS are “largely exhausted by the time a VRS provider’s traffic volume reaches 250,000 per month.”⁵⁷ Indeed, Dr. Furchtgott-Roth’s statement is entirely consistent with Professor Katz’s conclusion—there are economies of scale that impair very small providers unless they can grow, but those economies of scale do not substantially affect a firm the size of ZVRS/Purple.

Perhaps more importantly, Dr. Furchtgott-Roth did not have access to Rolka Loube’s data, which was provided after the comments were filed. Indeed, he references no data, even from Purple and ZVRS. *****BEGIN HIGHLY CONFIDENTIAL***** [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] *****END**

HIGHLY CONFIDENTIAL***⁵⁸ In light of Rolka Loube’s submission, however, any conclusions based on Purple and ZVRS’ February 2017 submissions would be suspect.

The Commission has regularly stated since 2011 that it does not intend to indefinitely use tiers to pay less efficient providers more for supplying minutes of service that Sorenson or other providers can supply at a lower price.⁵⁹ The data show that there is no reason not to move to a

⁵⁵ Furchtgott-Roth Expert Report at 21.

⁵⁶ *Id.* 7.

⁵⁷ Katz March 9 Decl. ¶ 28.

⁵⁸ *See supra* note 52-53.

⁵⁹ *See, e.g., Structure and Practices of the Video Relay Service Program; Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech*

unitary rate as soon as possible. That rate should be the sustainable rate of \$4.19, as described above. The Commission should then either adjust that rate under a price cap; hold a reverse auction to establish a rate; or get out of the ratemaking business by moving to a system under which telecommunications carriers provide VRS.

B. Even If the Commission Adopts a Tiered Rate Structure, It Must Treat ZVRS' Two Operating Subsidiaries as a Single Provider, or Allow Other Providers Similarly to Restructure

The *FNPRM* nowhere proposed that two subsidiaries of the same corporate parent could be treated as if they were not commonly owned and managed. Yet review of the Administrator's 2017 Annual Report, Exhibit 2, indicates that is the Administrator's assumption. Such a result would be wholly arbitrary and capricious, particularly if other providers were not allowed similarly to restructure.

The fact that the Administrator is assuming that ZVRS and Purple would each receive a Tier I and Tier II allotment is revealed by the projected quantities of Tier I minutes in Exhibit 2. For the period from July 1, 2017 to December 31, 2017—6 months—with two providers (Sorenson and ZVRS/Purple, because Convo and Global are reflected in the “Emergent Tier”), the maximum amount of Tier I minutes should be 12 million (1 million minutes/month x 6 months x 2 providers). Yet the Administrator projects over 16 million Tier I minutes during that period, which is arithmetically impossible unless ZVRS and Purple each receive an allotment of Tier I minutes.

Disabilities, Notice of Proposed Rulemaking, 26 FCC Rcd. 6496, 6496-97 ¶ 2 (2011); *Structure and Practices of the Video Relay Service Program; Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, Order, 27 FCC Rcd. 7150, 7154 ¶ 11 (2012); *VRS Reform Order*, 28 FCC Rcd. at 8698-99 ¶ 199.

Given the statute's direction to provide TRS "in the most efficient manner," it cannot possibly be a permissible use of the Fund to subsidize merger integration. Presumably, ZVRS purchased Purple because it believed it could combine operations and make the overall operation more efficient. Providing two allotments of Tier I and Tier II minutes to the combined ZVRS pays them not to engage in rapid merger integration. That is an abuse of the fund – and to the extent it has already occurred under the existing tiers should be reclaimed.

In any event, if the Commission were to permit this, then it must permit other providers the same opportunity to create multiple affiliates with multiple Tier I and Tier II allotments for the same period. It cannot reasonably treat providers differently with respect to affiliated operations.

C. The Unsupported Claims by Other VRS Providers Regarding Interoperability, Stockpiling Interpreters, and Non-Compete Clauses Are Inaccurate and, in Any Event, Do Not Justify the FNPRM's Tiered Rate Proposal.

The other providers claim that it would not be fair to move to a unitary, market-based rate (or unitary price cap) because there allegedly are significant interoperability problems⁶⁰ and because Sorenson allegedly stockpiles interpreters and unfairly uses non-compete clauses to prohibit its interpreters from working for other VRS providers.⁶¹ As shown below, those claims are completely inaccurate and should be disregarded by the Commission.⁶² And, in any event,

⁶⁰ See Joint Comments of ZVRS, Purple, Convo, and GlobalVRS to the Further Notice of Proposed Rulemaking 7-8, CG Docket Nos. 10-51 and 03-123 (filed Apr. 25, 2017) ("Joint Providers Comments").

⁶¹ See *id.* at 9.

⁶² In its separate comments, Convo makes other scurrilous, unsubstantiated, and untrue allegations about Sorenson's purported practices that do not merit a response. See Comments of Convo Communications, LLC. at 12-13, CG Docket Nos. 03-123 and 10-51 (filed Apr. 25, 2017) ("Convo Comments"). The Commission should disregard these allegations. Sorenson notes that it has endorsed and will implement the x-Card format as required, and the

because the Rolka Loube data show that ***BEGIN HIGHLY CONFIDENTIAL*** [REDACTED]

[REDACTED] ***END HIGHLY CONFIDENTIAL*** there is no reason to adjust *rates* on the basis of these allegations. Rather, if there were any merit to these allegations, the appropriate response would be for the Commission to adopt additional rules relating to interoperability or interpreters.

With respect to interoperability, it is telling that even though Sorenson had filed detailed evidence on the record concerning the steps the industry has taken to resolve interoperability problems before the opening comments were filed, the other providers did not take issue with any of Sorenson's specific claims.⁶³ They instead merely allege that interoperability "has not been solved," purportedly affecting the smallest provider most, and point to an unspecified number of consumer complaints concerning "black screens and degraded video quality."⁶⁴ As an

Commission long ago held that providers were not required to share features. *See, e.g., VRS Reform Order* at ¶ 60; *see also Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, Second Report and Order and Order on Reconsideration, 24 FCC Rcd. 791, 819-20 ¶ 63 (2008) ("[W]e disagree . . . that a default provider that furnishes CPE to a consumer must ensure that the CPE's enhanced features . . . can be used by the consumer if the consumer ports his or her number to a new default provider and uses the CPE with the new default provider.").

⁶³ *See, e.g.*, Letter from John T. Nakahata, Counsel to Sorenson Communications, Inc., to Marlene H. Dortch, Secretary, Federal Communications Commission, CG Docket Nos. 10-51 and 03-123 (Nov. 14, 2013); Letter from John T. Nakahata and Mark D. Davis, Counsel for Sorenson Communications, Inc., to Marlene H. Dortch, Secretary, Federal Communications Commission, CG Docket Nos. 10-51 and 03-123 (Oct. 29, 2013); Joint Letter from VRS Providers, to Marlene H. Dortch, Secretary, Federal Communications Commission, CG Docket Nos. 10-51 and 03-123 (Jan. 8, 2015).

⁶⁴ Joint Providers Comments at 7.

initial matter, all of the endpoints provided by Sorenson, ZVRS, Purple, and Convo are interoperable, while Global's status is uncertain because it has not fully engaged in testing.⁶⁵

Additionally, all providers have endorsed the transition, and are in the process of transitioning, to SIP as the fastest path to reaching improved levels of interoperability.⁶⁶ Sorenson, ZVRS, and Purple have all entered VRS account and equipment exchange agreements to allow their engineering teams to test new updates and quickly resolve any issues. Convo has declined to exchange testing accounts, but has been willing to schedule testing of both H.323 (the older protocol) and SIP. Global has declined to exchange accounts and has only been available to test SIP.⁶⁷

Until all providers complete the SIP transition, however, Sorenson, like all other providers, must use SIP-to-H.323 gateways to connect to other provider's services and devices that are still advertising the older H.323 protocol.⁶⁸ The H.323 gateway imposes some limitations on bit-rate, and thus can result in lower video quality and occasional connection problems. These issues will be further ameliorated with full implementation of the SIP Profile, as that allows for SIP-based interchange without the H.323 gateway and also supports H.264, a

⁶⁵ See Declaration of Grant A. Beckmann, Chief Technology Officer, Sorenson Communications, LLC ¶ 4 ("Beckmann April 24 Decl.") (attached as Exhibit 2 to Sorenson Comments).


⁶⁶ Joint Letter from VRS Providers, to Marlene H. Dortch, Secretary, Federal Communications Commission, CG Docket Nos. 03-123 and 10-51 (Oct. 31, 2016).

⁶⁷ See Declaration of Grant A. Beckmann, Chief Technology Officer, Sorenson Communications, LLC ¶ 4 ("Beckmann May 4 Decl.") (attached as Exhibit 4).

⁶⁸ *Id.* ¶ 6.

higher quality compression and decompression program than the historic one, H.263, supported by most providers.⁶⁹

Even though providers have been using SIP in their back ends for some time now, in cases where two providers use SIP back ends, but publish H.323 URIs (Uniform Resource Identifiers) in the iTRS database, gateways must convert from the SIP profile to H.323 and then back from H.323 to the SIP profile.⁷⁰ This conversion to and from H.323 results in limits on video compression and decompression (“CODEC”), frame size, and bitrate negotiation due to a lack of a published H.323 VRS standard, a lack of a SIP-to-H.323 gateway standard, and use of different gateways by different providers. Despite this, Sorenson has worked diligently with other providers to ensure that all calls are successful and enable users to communicate effectively. Once providers complete the transition to SIP, video quality will naturally improve as providers will be able to use SIP to SIP and successfully negotiate the best video CODEC, frame size, and bit-rate.⁷¹

But again, regardless of these final challenges, ZVRS and Purple both *****BEGIN**
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CONFIDENTIAL*** notwithstanding any interoperability problems. Accordingly, the solution to the remaining interoperability problems is not to continue to use tiered rates for four years, but to allow rapid completion of the SIP transition.

Furthermore, there is no basis for the other providers’ bare (and incorrect) allegation that Sorenson hires more interpreters that it needs and pays them above-market wages. To the

⁶⁹ *Id.* ¶ 7.

⁷⁰ *Id.*

⁷¹ *Id.*

contrary, like the other VRS providers, Sorenson is experiencing difficulty obtaining enough interpreting capacity because Sorenson's average wage has stayed flat for the last five years.⁷²

Indeed, Sorenson has ***BEGIN HIGHLY CONFIDENTIAL*** [REDACTED]

[REDACTED] ***END HIGHLY CONFIDENTIAL*** and the average hours worked per VI has decreased steadily over that period.⁷³ In that connection, it is important to understand that the vast majority of Sorenson's interpreters work part-time for Sorenson and do community interpreting as well, and thus have options not available to many employees in other businesses.⁷⁴ Community interpreting occurs in more predictable settings for which an interpreter can prepare. When interpreting for VRS, interpreters have no advanced notice of for whom they are interpreting, the subjects, or the regional variation in ASL that they will encounter, and they interpret speakers more generally typical of the population as a whole.⁷⁵

Nor does Sorenson pay above-market rates. To the contrary, Sorenson attempts to pay its interpreters enough to attract them from community interpreting.⁷⁶ Sorenson pays highly-skilled interpreters more than non-highly skilled ones, but that is industry practice and market forces demand that Sorenson do so.⁷⁷ To the extent that the other providers suggest that Sorenson

⁷² See Sorenson Comments at 22-23; Wakeland Decl. ¶ 6.

⁷³ *Id.* ¶ 6.

⁷⁴ *Id.*

⁷⁵ *Id.* ¶ 5.

⁷⁶ *Id.* ¶ 4.

⁷⁷ *Id.* ¶ 7.

offers competitors' interpreters more than they are worth to switch to Sorenson, there is simply no basis for that allegation—and the other providers have not attempted to provide one.⁷⁸

Finally, contrary to the other providers' assertion, non-compete clauses like Sorenson's six-month clause actually promote competition. Non-compete clauses serve "legitimate business concerns," such as "preserving trade secrets and protecting investments in personnel."⁷⁹ The latter interest is particularly relevant for Sorenson, which spends significant resources to train its VIs. Indeed, the clause is standard for skilled employees—and applies to all Sorenson employees, not just VIs—and is justified in part by Sorenson's investment in training its interpreters and because interpreters obtain confidential information about Sorenson's practices by working for Sorenson.⁸⁰ And Sorenson's clause is no broader than necessary to protect Sorenson's interests: during employment, it prohibits concurrent employment with another VRS provider, but not for community interpreting; after an employee leaves Sorenson; it lasts only six months and restricts employment only with other VRS providers; and it applies only to states in which the VI provided services for Sorenson.⁸¹ Regardless, the *FNPRM*'s proposed rate structure is not a rational approach to solving any problem the Commission might perceive with non-compete clauses for VIs.

⁷⁸ In any event, other providers compete for VIs by offering high rates. *See* ZVRS.Com Flyer (attached as Exhibit 5) (advertising earnings of \$50/hour for VI positions). At least one provider also apparently pays bonuses to interpreters for a high percentage of session minutes. *See* ZVRS Bonus Signs (attached as Exhibit 6) (advertising a \$500 weekly bonus for meeting or exceeding certain requirements). Sorenson believes that such a practice violates 47 C.F.R. § 64.604(c)(5)(iii)(N)(3) by tying compensation to compensable minutes, which are subset of session minutes. Sorenson does not offer such bonuses.

⁷⁹ *Aydin Corp. v. Loral Corp.*, 718 F.2d 897, 900 (9th Cir. 1983).

⁸⁰ Wakeland Decl. ¶ 9.

⁸¹ *Id.*

IV. THE COMMISSION SHOULD USE THE MARKET TO SET VRS RATE LEVELS.

A. Rates Set by Means of A Reverse Auction Would Be Preferable to FCC-Determined Rates.

The other providers raise concerns with the use of a reverse auction to initialize a price cap on the grounds that “there is no competitive market in VRS today” and an auction would “reinforce Sorenson’s position as the dominant VRS provider.”⁸²

As a threshold matter, the Commission could structure the auction in a number of different ways to ensure multiple providers can continue to compete. It is true that a market-based mechanism would end the indefinite subsidization of higher cost providers. But, doing so is consistent with the statute. And, ultimately, any provider that can offer service at a market-based rate can do so.

Moreover, Rolka Loube’s data *****BEGIN HIGHLY CONFIDENTIAL***** [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] *****END HIGHLY**

CONFIDENTIAL*** In light of that market share and Rolka Loube’s data showing that

*****BEGIN HIGHLY CONFIDENTIAL***** [REDACTED]

[REDACTED] *****END HIGHLY CONFIDENTIAL***** there is no reason to

think that an auction would harm ZVRS/Purple at all, much less in an unfair manner. Convo and

Global *****BEGIN HIGHLY CONFIDENTIAL***** [REDACTED]

[REDACTED] *****END HIGHLY**

⁸² Joint Providers Comments at 12.

⁸³ *Id.* at 3 n.7.

CONFIDENTIAL***, but if, as the Commission believes, rates are currently substantially higher than the actual costs of providing service, Convo and Global ought to be able to obtain such support—or new entrants will enter an auction on their own. For example, VTCSecure has previously stated that it could provide service at current rate levels, and thus should also be considered a potential bidder.⁸⁴

Dr. Furchtgott-Roth's specific criticisms of an auction approach do not warrant continued FCC-determined rate levels. First, he noted that the Commission's prior auctions selected a single provider rather than multiple providers.⁸⁵ But, this is not the case here. Indeed, Sorenson proposed an auction that would preserve multiple providers in order to allow for consumer choice—and given the preference of the Commission and consumers for a choice among providers, it is an *advantage* that Sorenson's proposal calls for multiple auction winners. Dr. Furchtgott-Roth does not claim that it would not be possible to have an auction that results in multiple providers.

Dr. Furchtgott-Roth also noted that Sorenson proposes an auction for price but not quantity.⁸⁶ Again, that is an *advantage* because it fully preserves consumer choice among providers for every call. And there is no need to auction quantity. Although a provider would no doubt have to bid high for a very small quantity of minutes—such as the amount provided by Convo and Global—a provider anticipating that it can attain a market share beyond 250,000 minutes per month can bid competitively without regard to quantity.

⁸⁴ See Letter from Earl W. Comstock, General Counsel, VTCSecure, LLC, to Marlene H. Dortch, Secretary, FCC, at 1, CG Docket Nos. 10-51 and 03-123 (filed Dec. 8, 2016).

⁸⁵ See Furchtgott-Roth Expert Report at 18.

⁸⁶ See *id.* at 18.

Dr. Furchtgott-Roth's bottom line is that "auctions may have a valuable role" in setting VRS rates, but Sorenson has not proposed a suitable plan. In light of Rolka Loubé's data, which presumably Dr. Furchtgott-Roth had not seen, Sorenson's proposal is, at the least, superior to continued FCC-determined rates. But Sorenson does not assert that it has proposed a perfect plan. If Sorenson's plan falls short in any way, there is no doubt that the agency that has led the world in designing spectrum auctions, and recently adopted reverse auctions for services that are comparable to VRS, can design a suitable VRS auction.

B. Requiring Providers of Voice Telephone Service to Provide VRS Would Be Preferable to Continuing Old-Fashioned Rate Regulation.

The other providers raise concerns with the alternative market-based proposal to require voice providers to provide service themselves because, the other providers assert, "the telecommunications carriers would obviously desire to work with the dominant carrier."⁸⁷ But Rolka Loubé's data show that *****BEGIN HIGHLY CONFIDENTIAL***** [REDACTED]

[REDACTED] *****END HIGHLY CONFIDENTIAL*****

Moreover, voice providers would likely prefer to ensure that they have a choice among VRS contractors, and might enter into contracts with more than one VRS provider for that reason. Or, and especially if the Commission is correct that rates are currently too high, they would self-provision or provide service, in the words of the statute, "in concert with other carriers."⁸⁸ They might even buy an existing smaller provider and attempt to turn them into real competitors.

⁸⁷ Joint Providers Comments at 13.

⁸⁸ 47 U.S.C. § 225(c).

Dr. Furchtgott-Roth describes this proposal as “intellectually intriguing,” but believes it is a “much longer-term solution than the others the Commission has before it.”⁸⁹ But the principal proposal before the Commission is a second four-year cost-of-service plan with tiers, even though the Commission has recognized the flaws in cost-of-service regulation and the inefficiencies in tiers. And while the prior four-year plan was supposed to be a “glide path” to a unitary, market-based rate, the current proposal does not lead anywhere. A transition to a system where telephone companies provide VRS could be done in a much shorter time frame than four years. Indeed, it is not clear why it would take more than a few months for voice providers to enter into contracts with the existing VRS providers.

Dr. Furchtgott-Roth notes that some telecommunications carriers previously provided VRS but have left the market.⁹⁰ That is correct. The telecommunications carriers left after the Commission began its series of drastic rate cuts in 2010—which supports the conclusion that VRS rates have become too low rather than too high, and too plagued with regulatory uncertainty. Otherwise, why leave the market? Companies that primarily provide TRS, in contrast, would suffer a serious hemorrhage rather than a flesh wound if they stopped providing VRS, which is why most (but not all) of them have continued to provide service. However, as the Commission’s experience with IP Relay shows, it is possible to drive even these companies from the market by driving rates below profitable levels.

Dr. Furchtgott-Roth also notes that there is disagreement concerning how to define “telecommunications carriers.”⁹¹ But that is not a problem with Sorenson’s proposal.

⁸⁹ Furchtgott-Roth Expert Report at 20.

⁹⁰ *See id.*

⁹¹ *Id.* at 20-21.

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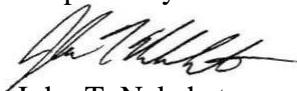
Sorenson's proposal is that providers of voice telephone service should be required to provide VRS in any geographic location where they provide voice service. Just as the Commission has treated Voice over Internet Protocol providers as carriers in some circumstances without determining whether they are telecommunications carriers within the meaning of the statute, it may require providers of voice telephone service to provide VRS without classifying them as telecommunications carriers

In short, the other providers have offered no reason not to abandon FCC rate-setting in favor of requiring providers of voice telephone service to provide VRS, whether on their own or through private contracts. The flaws in the current ratemaking methodology are manifest and the Commission now appears to have no plan other than to kick the can down the road for another four years. Adopting that approach would get the Commission out of the business of ratemaking and fund management, and the Commission has recognized both that it does not excel at those tasks and that the market is much superior at setting rates.

CONCLUSION

The Commission should adopt a market-based rate; it should not, in any event, adopt a Tier III rate below \$4.19. In the event that it continues to exclude costs-related to access devices, and thus seeks to shift these hundreds of dollars of costs to deaf consumers, that rate should be no lower than \$3.73. In any event, there is no basis for reducing the Tier III rate below the current \$3.49 level.

Respectfully submitted,



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May 4, 2017

Exhibit 1

Broadband and internet use among those with difficulty hearing

John B. Horrigan, PhD

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Key Findings

This white paper presents findings of analysis of survey data comparing home broadband adoption, telephone adoption, mobile broadband adoption, and other personal technology assets among those who are deaf or have serious difficulty hearing, compared to those without such issues. Most of the analysis is based upon American Community Survey data for 2015, though there is also comparison to a 2009 Federal Communications Commission survey that included questions on whether respondents were deaf or had serious difficulty hearing.

I. Those who are deaf or have serious difficulty hearing report lower levels of communications technology adoption, though the differences for the telephone are negligible.

Communications technology adoption – American Community Survey (2015)

	Deaf or Serious Difficulty Hearing	All others
Telephone	96.9%	97.4%
Desktop, laptop, netbook, or notebook computer	62.2%	79.2%
Broadband at home	58.6%	77.4%
Handheld computer, smart mobile phone, or other handheld wireless computer	49.0%	76.4%
Mobile broadband plan	38.9%	25.2%
Rely <u>exclusively</u> on mobile broadband for home access	6.2%	4.6%

In 2009, according to analysis of FCC data, 43% of those who said they were deaf or had serious difficulty hearing had broadband at home, compared to 65% for the entire nation at that time.

II. Having serious difficulty hearing or being deaf is correlated with lower rates of home broadband adoption, even controlling for factors such as age, income, and education, which are also linked to lower broadband adoption.

An important context in understanding this factor is the role of age. Some two-thirds of adults who say they are deaf or have serious difficulty hearing are age 65 or older. Differences in home broadband adoption between older adults with hearing issues and older adults without them are very small. However, among the one-third of those with hearing issues who are under the age of 65, home broadband rates lag those without hearing problems by sizable margins.

III. Differences in home broadband and mobile broadband adoption rates widen, when comparing those with hearing problems to those without, at lower income levels – and people with hearing problems are more likely to have lower incomes than other households.

Although lower incomes are negatively correlated with tech adoption, they are largest at the lowest income levels. Just one-third (34.2%) of those with hearing problems and household incomes under

\$25,000 annually have broadband at home compared to just over half (52.3%) of those without hearing problems in that income range.

It is also the case that people who are deaf or have serious difficulty hearing are more likely to have low household incomes than the rest of the population. Among those who are deaf or have serious difficulty hearing, one-third (33.3%) have annual household incomes below \$25,000; the comparable figure for the rest of the population is 21.4%. The median income for households with someone who is deaf or has serious hearing difficulty is \$38,500, while it is \$56,800 for all other households.

Introduction

The past two decades have seen the internet go from a tool for “information elites” in society to a common tool that is widely disseminated in society. In 1997, 36% of Americans used the internet and “always on” high-speed access at home was a rarity. By 2016, 90% of Americans were internet users, and the way people go online has multiplied. Some 73% have a broadband internet connection at home, 78% have smartphones, and 51% have tablet computers.

As pervasive as internet connectivity is, adoption and use has not been uniform across demographic groups. This is especially true for people with disabilities. People with *any* sort of disability – which could include issues with mobility, sight, hearing, or mental health – have historically had lower rates of internet use and home broadband adoption. Some historical data points:

- A [2009 Federal Communications Commission \(FCC\) survey](#) showed that 42% of Americans with some sort of disability had a broadband internet connection at home – compared to the 65% figure for all Americans at that time.
- A 2016 Pew Research Center [report](#) showed that Americans with disabilities had consistently lower levels of technology use than those without disabilities. Specifically:

	Have any disability	Do not have disability
Desktop or laptop computer	61%	81%
Smartphone	58%	80%
Home broadband	57%	76%
Tablet computer	36%	54%

People with disabilities share many of the same characteristics that go along with lower levels of technology adoption. Those with some sort of disability tend to be older, have lower incomes, and have lower levels of educational attainment than the rest of the population. Those demographic markers are also the ones associated with low tech adoption in the general population. This raises the question of whether lower tech adoption figures are a consequence of people’s disabilities or the other characteristics (e.g., low income) that predict lower technology adoption. Analysis of this question finds that disability status matters separate and apart from other demographic or socio-economic factors. That is, when

controlling for age, income, and other demographic variables, having a disability exerts a negative force on technology adoption.

Many surveys of technology adoption and disability status focus broadly on whether a person has a disability or not. With only a few exceptions, these surveys do not explore specific disabilities, such as difficulty hearing. In this paper, the focus will be on adult Americans who have difficulty hearing or are deaf. Two datasets will offer comparisons at two points in time. First, the 2009 FCC survey did ask respondents whether they had difficulty hearing. Some 8% of respondents said that they did and this paper will present analysis on their broadband adoption rates in comparison to the 2009 norm.

Second, and in a more detailed analysis, this paper will explore data from the 2015 American Community Survey. The ACS, which is administered by the U.S. Census Bureau, has a very large sample size for analysis by the public. The ACS also ask respondents whether they are *deaf* or have *serious difficulty hearing*, along with questions about internet and home broadband use. This allows not only a way to describe broadband adoption among those who are deaf or who have difficulty hearing. It also, because of the ACS's large sample size, permits analysis of broadband adoption for those with hearing issues, by variables such as age and income. The final – and important – advantage of the ACS is how it conducts the survey. The ACS offers respondents a number of options for completing the survey – U.S. mail, online, telephone, or in-person – which increases confidence that deaf and hard-of-hearing participate in the survey.

a. Federal Communications Commission 2009 Survey

In connection with the development of the National Broadband Plan, the FCC in 2009 conducted a survey of adult Americans that focused on their adoption and use of broadband. The survey was conducted using the telephone, employing random digital dial telephone survey methodologies which are standard in the industry. To conduct analysis of specific population segments, the survey had a large sample of 5,005 Americans. The survey explored broadband adoption and disability by asking six specific questions about this topic, including one that asked respondents if they were deaf or have serious difficulty hearing – the same question used by Census in the ACS. Overall, 8% of adults said they had serious difficulty hearing or were deaf.

In the 2009 FCC survey, 24% of respondent reported having some sort of disability and, of those, 42% said they had a broadband internet connection at home. Among the 8% who reported being deaf or having serious difficulty hearing, 43% said they had broadband at home. In the FCC survey, some 45% of those who are deaf or have serious difficulty hearing at age 65 or older; just 15% of respondents who do not report hearing problems are age 65 or older. Income is another key difference between those with hearing problems versus those without; 38% of those who report hearing problems have annual household incomes of \$30,000 or less, while 25% of remaining adults fall in that income threshold. Additionally, educational attainment marks a difference between those who are deaf or have serious difficulty hearing

compared to those who are not. Some 65% of those with hearing problems have no more than a high school degree compared with 46% for all other adults.

These three factors – income, education, and age – are those most strongly associated with home broadband adoption. That is, those with less income or education, as well as older adults, tend to have lower rates of home broadband adoption. These characteristics also, in a general sense, describe the population of those who are deaf or who have difficulty hearing. Notwithstanding these overlapping characteristics, analysis shows that being deaf or having serious difficulty hearing is an independent factor associated with a lower level of home broadband adoption. When controlling for age, income, and education, having a hearing problem is negatively correlated with having broadband at home.

b. 2015 American Community Survey

1) *Home Broadband Adoption*

The American Community Survey measures whether people have broadband at home by asking the following question, with answer choices listed: “At this house, apartment, or mobile home – do you or any member of this household subscribe to the Internet using ...

- Dial-up service
- DSL service
- Cable modem service
- Fiber-optic service
- Mobile broadband plan for a computer or a cell phone
- Satellite Internet service
- Some other service?”

Respondents are permitted to answer “yes” to more than one choice. To come up with an overall measure of home high-speed internet adoption, those who have at least one out of five options (DSL, cable modem service, fiber-optic service, mobile broadband, or satellite internet service) are counted as having home broadband service. Analysis of ACS Public Use Microdata Sample (PUMS) for 2015 shows that 76.4% of U.S. households subscribed to broadband.

Among those with any sort of disability (17% of the population), 57.8% have broadband at home. Among the 5.6% who say they are deaf or have serious difficulty hearing, some 58.6% have broadband at home. For those without hearing issues, 77.4% have broadband at home. The large sample size that ACS provides in its PUMS data allows examination of broadband adoption rates among those with hearing difficulty by age and income.

Age – Home Broadband Adoption

	Deaf or Serious Difficulty Hearing	All others
18-24	66.7%	76.2%
25-34	73.1%	81.9%
35-44	74.7%	84.2%
45-54	70.4%	82.6%
55-64	68.2%	78.5%
65-74	68.3%	72.3%
75-84	53.1%	54.5%
85+	33.1%	33.7%

The table shows that gaps in home broadband adoption are most pronounced for those under the age of 65. People who are deaf or who have serious difficulty hearing generally lag those without such issues by about 10 percentage points when focusing on adults under age 65. Thereafter, the gaps narrow and for those over the age of 75, there is little difference in home broadband adoption rates among those with hearing difficulties and those without.

As the table below shows, some two-thirds (67.4%) of those who are deaf or have serious difficulty hearing are over the age of 65. The upshot is that, though having a hearing problem (serious difficulty hearing or being deaf) is a significant factor explaining overall differences in home broadband adoption for those with hearing problems, the difference is driven mainly by sizable adoption gaps among adults under the age of 65 who are deaf or have serious difficulty hearing.

Distribution of those who are deaf or have serious difficulty hearing by age

	Deaf or Serious Difficulty Hearing
18-24	0.6%
25-34	2.6%
35-44	4.2%
45-54	8.7%
55-64	16.4%
65-74	25.0%
75-84	23.4%
85+	19.0%

With respect to income, the table below shows gaps in broadband adoption across all income levels when comparing those without hearing problems to those who are deaf or have serious hearing difficulty. The gaps are much larger for households whose annual incomes are below \$50,000 annually.

Income and Home Broadband Adoption

% in each incomes range with broadband at home	Deaf or Serious Difficulty Hearing	All others
Less than \$25,000	34.2%	52.3%
\$25,001 and \$49,999	57.3%	71.5%
\$50,000 and \$74,999	73.4%	83.4%
\$75,000 and \$99,999	81.8%	89.3%
\$100,000 and \$149,999	85.9%	92.9%
Greater than \$150,000	86.9%	95.2%

It is also worth noting that, in general, those who are deaf or have serious difficulties hearing have lower incomes than other Americans. The table below shows household income for those with hearing problems and those who do not report such issues.

Income – Deaf or serious hearing difficulty and all others

	Deaf or Serious Difficulty Hearing	All others
Less than \$25,000	33.3%	21.4%
\$25,001 and \$49,999	27.0	22.8
\$50,000 and \$74,999	16.3	17.9
\$75,000 and \$99,999	9.0	12.4
\$100,000 and \$149,999	8.2	13.7
Greater than \$150,000	6.0	11.8

One-third (33.3%) of households where people report deafness or serious difficulty hearing have annual incomes of \$25,000 or less – much greater than the 21.4% for all others. The median household income for homes with those having serious hearing problems or deafness is \$38,500. For all other households, the figure is much higher – \$56,800.

2) Telephone use

Although there are gaps in broadband use among those who are deaf or have serious difficulty hearing, there are only small gaps for household telephone use, which is nearly ubiquitous in the United States. Some 97.3% of homes in the United States have a telephone (either landline or mobile). Looking across telephone adoption among those with difficulty hearing and those without shows essentially no difference in telephone adoption, regardless of income level. Some 96.9% hose who are deaf or have serious difficulty hearing have telephones, little different than the national average.

Income and telephone

	Deaf or Serious Difficulty Hearing	All others
Less than \$25,000	95.1%	95.4%
\$25,001 and \$49,999	97.3%	97.2%
\$50,000 and \$74,999	97.9%	97.7%
\$75,000 and \$99,999	98.1%	97.9%
\$100,000 and \$149,999	98.0%	98.2%
Greater than \$150,000	98.6%	98.6%

3) Mobile Internet Access

The role of mobile access to the internet looms larger today than just a few years ago. Various research studies have documented the rise in smartphone use and reliance on mobile means for accessing the internet. Because the ACS asks about mobile access, it is worth examining patterns in this realm for the deaf or those with serious difficulty hearing.

As noted, the ACS asks people whether, for household internet access, they subscribe to a mobile broadband plan for a cell phone or a computer. This is not the same as asking whether people have a smartphone, although if a household does use a smartphone with a data plan as its internet access means, the respondent might respond affirmatively. It is also possible that the respondent may answer “yes” in thinking about a mobile broadband plan, while also responding “yes” to another means of accessing the internet from home, such as a broadband plan that uses a cable modem to get online. Finally, a respondent might also respond “yes” if the home uses a mobile “hotspot” to access a wireless broadband signal.

For all households, analysis of ACS data shows that:

- 38.1% have a mobile broadband plan.
- 6.1% rely exclusively on a mobile broadband plan for home access.

Among respondents who are deaf or have serious difficulty hearing:

- 25.2% have a mobile broadband plan.
- 4.6% rely exclusively on a mobile broadband plan for home access.

For those without any serious hearing difficulties:

- 38.9% have a mobile broadband plan.
- 6.2% rely exclusively on a mobile broadband plan for home access.

Looking at how these two metrics break out by age and income shows some patterns of interest. There is not a lot of difference across age groups for having a mobile broadband plan of any kind, though the differences unfold more noticeably among older adults. Younger adults with hearing issues seem more reliant exclusively on mobile broadband for home access, though the share of young adults with hearing problems is small.

Age

	Mobile Broadband Plan		Rely <u>exclusively</u> on mobile broadband	
	Deaf or Serious Difficulty Hearing	All others	Deaf or Serious Difficulty Hearing	All others
18-24	40.6%	36.6%	16.0%	9.8%
25-34	39.5	44.4	12.1	8.3
35-44	35.5	39.5	8.6	7.2
45-54	36.0	43.3	6.8	6.4
55-64	37.1	38.1	6.0	5.4
65-74	40.7	31.3	4.8	4.2
75-84	35.5	36.3	3.0	2.9
85+	23.3	24.2	2.0	1.7

On a first look, however, some results seem counter-intuitive. Looking at the column of results for any mobile broadband plan shows little difference comparing those with hearing issues and all others. For exclusive reliance on a mobile plan, it appears those with hearing issues have higher rates of exclusive reliance on mobile than those with no such problems. Recall, however, that those who report that they are deaf or have serious difficulty hearing are overwhelmingly older adults. This pulls the averages for those with hearing issues down, given that those age 65 and older have lower rates of use of mobile and that those age 65 and older account for about two-thirds of those with serious hearing problems or deafness.

The results on income are more in line with expectations, as those with difficulty hearing or deafness are less likely than those without such problems to have a mobile broadband plan or rely exclusively on it for access across all income ranges.

Income

	Mobile Broadband Plan		Rely <u>exclusively</u> on mobile broadband	
	Deaf or Serious Difficulty Hearing	All others	Deaf or Serious Difficulty Hearing	All others
Less than \$25,000	12.1%	22.9%	3.8%	6.9%
\$25,001 and \$49,999	22.0	32.6	4.9	7.4
\$50,000 and \$74,999	31.4	40.2	5.7	6.7
\$75,000 and \$99,999	38.6	46.0	5.0	5.6
\$100,000 and \$149,999	44.6	50.5	4.9	5.0
Greater than \$150,000	48.9	56.9	4.4	3.8

4) Other technology measures – computers and handheld devices

The ACS also asks respondents other questions about personal technology use. Specifically, the survey asks people whether, in their house, apartment, or mobile, they or others in the household have:

- A desktop, laptop, netbook, or notebook computer;
- A handheld computer, smart mobile phone, or other wireless handheld computer.

Some 78.3% of homes report having a computer (i.e., desktop, laptop, netbook, or notebook), while 74.8% have a handheld device. Note that the 74.8% figure is in line with national figures for smartphone adoption (78% according to Pew Research in 2016). This ACS measure aims to capture smartphone adoption, but respondents could answer “yes” to the ACS question if they have a tablet computer.

	Deaf or Serious Difficulty Hearing	All others
Desktop, laptop, netbook, or notebook computer	62.2%	79.2%
Handheld computer, smart mobile phone, or other handheld wireless computer	49.0%	76.4%

The figures show gaps for those who are deaf or hard of hearing relative to all other Americans. There are larger gaps for those who are deaf or have serious difficulty hearing for handheld devices relative to broadband. Those with hearing issues trail all others in home broadband adoption by about 19 percentage points (58.6% versus 77.4%); for handheld devices, the gap is about 27 percentage points (49.0% versus 76.4%). The larger gap for handheld devices is likely a function of the age of the population of those deaf or with serious difficulty hearing. Smartphones and tablet computers are newer technologies, and older Americans generally trail in the adoption of such novel gadgets and services.

The following tables show how gaps in computer and handheld access play out across income categories, comparing those who are deaf or have serious difficulty hearing with those without such problems. As the tables show, gaps are most pronounced at low-income and lower middle-income categories. For handheld devices, low-income households with people having hearing problems are about half as likely to have a handheld or wireless computing device than similar low-income households without people with hearing difficulties.

The other difference to note is how access for computers and handhelds differ at upper income levels. For having a computer of some sort, differences between those with hearing issues and those without narrow noticeably as income rises. For handheld devices, gaps are sizeable at upper income levels when looking at those with hearing problems and those without. For households with income over \$100,000 annually, the “hearing difficulty” versus “no hearing difficulty” gaps are around 6 percentage points for computer access, while the gap is roughly 13 percentage points for the same income categories for handheld devices.

Income and computer access

	Deaf or Serious Difficulty Hearing	All others
Less than \$25,000	37.8%	54.0%
\$25,001 and \$49,999	61.3	73.3
\$50,000 and \$74,999	78.0	85.2
\$75,000 and \$99,999	85.4	91.3
\$100,000 and \$149,999	89.3	94.7
Greater than \$150,000	90.3	96.8

Income and handheld devices

	Deaf or Serious Difficulty Hearing	All others
Less than \$25,000	28.0%	54.1%
\$25,001 and \$49,999	44.1	69.7
\$50,000 and \$74,999	60.8	80.7
\$75,000 and \$99,999	72.1	87.1
\$100,000 and \$149,999	78.6	91.5
Greater than \$150,000	80.7	94.1

Exhibit 2

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Exhibit 3

DECLARATION OF CHRISTOPHER WAKELAND

I, Christopher Wakeland, do hereby, under penalty of perjury, declare and state as follows:

1. My name is Christopher Wakeland. I am the VP, Interpreting, for Sorenson Communications, LLC, which is based in Salt Lake City. I have been with Sorenson since 2003, and have held this position since 2004. I received BA and Masters degrees from Brigham Young University, Provo, Utah.
2. The purpose of this declaration is to support Sorenson's comments in the ongoing ratemaking proceeding for video relay service ("VRS").
3. I am personally responsible for recruiting and managing Video Interpreters for Sorenson's VRS, and have personal knowledge of Sorenson's recruitment and management of Video Interpreters ("VIs"). I am also a certified ASL interpreter, and have worked as an interpreter for more than 25 years.
4. Working in VRS is challenging, as it requires higher skills, world knowledge, language aptitude, and stamina than some other types of interpreting jobs. Sorenson depends on being able to hire and retain the best interpreters possible, and to provide them with strong training and technical support. I spend a substantial amount of time working and talking with our Video Interpreters to ensure that we are doing this well.
5. The pool of potential Sorenson VIs has many choices of when and where to interpret, including many higher-wage interpreting jobs in the community. I have attached several examples of community interpreting rates. *See Exhibit 7.* Community interpreting occurs in more predictable settings for which an interpreter can prepare. When interpreting for VRS, interpreters have no advanced notice of for whom they are interpreting, the subjects, or the regional variation in ASL that they will encounter, and they interpret speakers more generally typical of the population as a whole.
6. The vast majority of Sorenson's VIs work part-time for Sorenson and do community interpreting as well, and thus have options not available to many employees in other businesses. As a result, Sorenson is experiencing difficulty recruiting and retaining sufficient, qualified interpreting capacity, in part because Sorenson's average wage for VIs has stayed essentially flat for the last five years. As the rates paid for community interpreting have increased, the average number of hours worked by Sorenson's part-time interpreters has decreased each of the last four years, and *****BEGIN HIGHLY CONFIDENTIAL***** [REDACTED]
[REDACTED] *****END HIGHLY CONFIDENTIAL*****

7. These market forces of higher wages being offered in the community are putting upward wage pressure on Sorenson. Sorenson pays highly-skilled interpreters more than non-highly-skilled interpreters, but that is common practice and market forces demand that Sorenson do so. This upward pressure on wages will continue for the foreseeable future, and thus we expect these costs to increase 15-25% over the next five years.

8. Furthermore, many states are increasing licensure/certification requirements for sign language interpreters. While these objectives are laudable, they have the effect of further limiting the pool of available interpreters and thus add upward pressure on VI wages.

9. In addition, interpreter-related benefits costs are increasing, both for full-time interpreters (such as for health care insurance), as well as for part-time interpreters. For instance, an increasing number of states are requiring companies to provide paid sick leave to part-time employees. VRS providers only began incurring these costs in 2016, and they escalated as more states and localities adopted these requirements—and they will continue to increase to the extent that additional state or localities do so. This is in addition to wage cost increases.

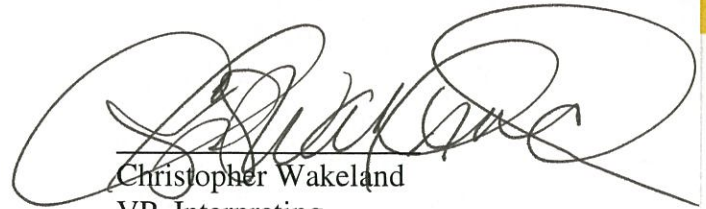
10. I do not expect that we will be able to obtain greater efficiencies from our VIs.

BEGIN HIGHLY CONFIDENTIAL

END HIGHLY CONFIDENTIAL and at this point, our VIs are setting up calls and interpreting for nearly all the time except for a ten-minute break each hour.

9. Sorenson Video Interpreters sign a limited noncompete clause. The clause is standard for skilled employees—and applies to all Sorenson employees, not just Video Interpreters—and is justified in part by Sorenson's investment in training its interpreters and because interpreters obtain confidential information about Sorenson's practices by working for Sorenson. During employment, it prohibits concurrent employment with another VRS provider, but not for community interpreting; after an employee leaves Sorenson, it lasts only six months and restricts employment only with other VRS providers; and it applies only to states in which the VI provided services for Sorenson

Executed on May 4, 2017.



Christopher Wakeland
VP, Interpreting
Sorenson Communications
4192 South Riverboat Road
Salt Lake City, Utah 84123

Exhibit 4

DECLARATION OF GRANT A. BECKMANN

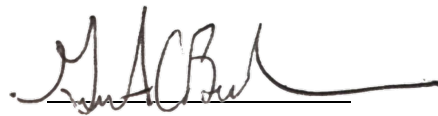
I, Grant A. Beckmann, do hereby, under penalty of perjury, declare and state as follows:

1. My name is Grant A. Beckmann. I am the CTO, Security, Compliance, for Sorenson Communications, LLC, which is based in Salt Lake City. I have held this position since 2016. I have also served as Vice President of Engineering at Sorenson from 2010 through 2016. I received BS degree from Brigham Young University, Provo, Utah.
2. The purpose of this second declaration is to support Sorenson's comments in the ongoing ratemaking proceeding for video relay service ("VRS"). One issue in this proceeding involves the extent to which the videophones and other endpoints used by different VRS providers are interoperable.
3. As I stated in my Declaration dated April 23, 2017, I have personally managed Sorenson's efforts to make its videophones interoperable since 2010. I hereby incorporate and reiterate my statements in that Declaration.
4. Sorenson has converted its internal systems to SIP to support the US SIP Video Relay Service Profile (SIP profile), and believe all other providers are in the process or have completed that same transition. As part of this transition to the SIP profile from H.323, Sorenson, ZVRS, and Purple have all entered VRS account and equipment exchange agreements to allow their engineering teams to test new updates and quickly resolve any issues. Convo has declined to exchange testing accounts, but has been willing to schedule testing of both H.323 and SIP. Global has declined to exchange accounts and has only been available to test SIP.
5. As part of the provider's ongoing commitment to interoperability together we have scheduled semi-annual interop conferences with the next conference scheduled for May 22, 2017 in Salt Lake City.
6. Until all providers complete the SIP profile transition, Sorenson, like all other providers, must use SIP-to-H.323 gateways to connect to other provider's services and devices that are still advertising the older H.323 protocol. In cases where two providers use SIP back ends, but publish H.323 URIs (Uniform Resource Identifiers) in the iTRS database, gateways must convert from the SIP profile to H.323 and then back from H.323 to the SIP profile. This results in limits on video codecs, frame size, and bitrate negotiation due to a lack of a published H.323 VRS standard, a lack of SIP-to-H.323 gateway standards, and the use of different gateways by different providers.

7. Sorenson has worked diligently with other providers to ensure that all calls are successful and enable users to communicate effectively. Once providers complete the transition to SIP, video quality will naturally improve as providers will be able to use SIP to SIP and successfully negotiate the best video codec, frame size, and bit-rate. Indeed, Sorenson added SIP URIs to the iTRS database and has observed significant improvement in recent months with 80+% of incoming 3rd-party provider point-to-point calls now using SIP and H.264 at higher bitrates. Other providers are in the process of registering SIP URIs in iTRS, which results in about 30% of outgoing point-to-point calls are now using SIP and H.264 at higher bitrates.

8. Finally, the commission should always expect that Sorenson will have a development priority of providing VRS users with the highest quality video possible by using advanced codecs, video routing technology, and error correction methods.

Executed on May 4, 2017.



Grant A. Beckmann
CTO, Security, Compliance
Sorenson Communications
4192 South Riverboat Road
Salt Lake City, Utah 84123

Exhibit 5



We're Hiring!

VIDEO INTERPRETING
POSITIONS ARE AVAILABLE
RIGHT NOW

CHOOSE *Z*

AND EARN POTENTIALLY
\$50 AN HOUR OR MORE.

Send your resume to
jobs@zvrs.com

Exhibit 6

In order to serve the community better, ZVRS is implementing a promotion for the Video Interpreting Team. Serving the community is our priority: here's what that looks like.

PEAK HOURS

M-F, 8am to 5pm Eastern Time

OFF PEAK HOURS

All hours outside of Peak

On an hourly basis:

80% Occupancy PEAK - (session time/logged in time)

Unavailable (red screen) - used for initial test call set up and call transfer if in-center transfer is not available.

Ring Time

Audio Calls - Auto Answer enabled

Video Calls - Answered within the first ring
(less than 0:06 seconds)

Wrap Up Time "End Session" less than
0:06 seconds

80% Occupancy OFF PEAK

Unavailable - Used for initial test call set up and call transfer if in-center transfer is not available. If call volume is not "present" and calls are not abandoned this measurement will be waived.

Ring Time

Audio Calls - Auto Answer enabled

Video Calls - Answered within the first ring
(less than 0:06 seconds)

Wrap Up Time "End Session" less than
0:06 seconds

This will be measured hourly, reported weekly.
Meeting / exceeding the above items will result in a weekly \$500 bonus.

Wrap Up Time "End Session" less than
0:06 seconds

Wrap Up Time "End Session" less than
0:06 seconds

This will be measured hourly, reported weekly.
Meeting / exceeding the above items will result in a weekly \$500 bonus.

PROMO RULES

- Teamed Calls that effect your login % will be managed by your Center Manager / Regional Director
- Must work a minimum of 20 hours per week.

EMPLOYEE ELIGIBILITY

- All Full and Part Time employees who work a minimum of 20 hours in a week (Saturday – Friday)
- Must be employed by Z at the times of payout
- Center Manager – If 90% of your team accomplishes the goal, you will receive \$500.00/week.

Exhibit 7

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